

CLAIMS

- 1.(currently amended) A refractory article for use in the casting of molten metal comprising a carbon-containing refractory piece having a first outer surface, an insulating coating comprising at least 20 wt.% ceramic matrix and at least 5 wt.% insulating microspheres, substantially the insulating coating covering the entire first outer surface thereby forming a second outer surface, and a glaze covering at least a portion of the second outer surface.
- 2.(original) The refractory article of claim 1, wherein the refractory piece comprises a carbon-bonded refractory composition.
- 3.(original) The refractory article of claim 1, wherein the refractory piece comprises a nozzle.
- 4.(original) The refractory article of claim 3, wherein the nozzle comprises a thin-slab nozzle.
- 5.(original) The refractory article of claim 1, wherein the insulating coating is made from an aqueous suspension comprising 20-80 wt.% ceramic matrix, 5-40 wt.% insulating microspheres, 0.5-15 wt.% one or more binders, 5-20 wt.% of a metal capable of melting under preheat conditions, and up to 25 wt.% water.
- 6.(original) The refractory article of claim 1, wherein the glaze comprises a composition resistant to oxygen diffusion.
- 7-18. (canceled)
- 19.(previously presented) A refractory article for use in the casting of molten metal comprising:
 - a) a carbon-containing refractory piece having a first outer surface;

- a) an insulating coating comprising insulating microspheres and covering at least a portion of the first outer surface thereby forming a second outer surface; and
- a) a glaze covering at least a portion of the second outer surface.

20.(previously presented) The refractory article of claim 19, wherein the refractory piece comprises a carbon-bonded refractory composition.

21.(previously presented) The refractory article of claim 19, wherein the refractory piece comprises a nozzle.

22.(previously presented) The refractory article of claim 1, wherein the insulating coating is made from an aqueous suspension comprising 20-80 wt.% ceramic matrix, 5-40 wt.% insulating microspheres, 0.5-15 wt.% one or more binders, 5-20 wt.% of a metal capable of melting under preheat conditions, and up to 25 wt.% water.

23.(previously presented) The refractory article of claim 19, wherein the glaze comprises a composition resistant to oxygen diffusion.

24.(currently amended) A refractory article comprising a carbon-containing refractory piece having an ~~interior surface defining~~ a bore for flowing molten metal therethrough and a first outer surface, an insulating coating comprising at least 20 wt.% ceramic matrix and at least 5 wt.% insulating microspheres, substantially the insulating coating covering the entire first outer surface thereby forming a second outer surface, and a glaze covering at least a portion of the second outer surface.

25.(new) The refractory article of claim 1, wherein the insulating coating covers the first outer surface at a thickness up to 7 mm.

26.(new) The refractory article of claim 19, wherein the insulating coating covers the first outer surface at a thickness up to 7 mm.

27.(new) The refractory article of claim 24, wherein the insulating coating covers the first outer surface at a thickness up to 7 mm.